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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/702,689	11/06/2003	Vinay Mehta	FDN-2815	8995

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GAF MATERIALS CORPORATION
Attn: William J. Davis, Esq.
Legal Department, Building No. 10
1361 Alps Road
Wayne, NJ 07470

EXAMINER

COLE, ELIZABETH M

ART UNIT	PAPER NUMBER
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1794

MAIL DATE	DELIVERY MODE
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04/17/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/702,689	Applicant(s) MEHTA ET AL.	
	Examiner Elizabeth M. Cole	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 9-12, 15-31, 34 and 36 is/are pending in the application.
- 4a) Of the above claim(s) 19-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 9-12, 15-18, 30-31, 34, 36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/20/09</u> . | 6) <input type="checkbox"/> Other: _____ |

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/20/09 has been entered.

2. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. In claim 3, the recitation of "a second breathable thermoplastic film located on a second surface thereof" renders the claim vague and indefinite because it is not clear to what second surface the claim refers, the second surface of the glass fiber substrate, the second surface of the first breathable film or a second surface of the underlayment which is a combination of at least the first breathable film and the glass fiber substrate. The claimed structure is not clear.

4. Claim 15 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 15 recites that the adhesion improvement component which is blended with the breathable polymer is ethyl methyl acrylate having a methyl acrylate level of about 18% or greater, however the specification

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teaches using EMA as a component in a tie layer but does not teach blending it with the breathable polymer layer.

5. Claim 2 is objected to because of the following informalities: maleic is spelled incorrectly in claim 2. Appropriate correction is required.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-5, 9-12, 15-17, 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 96/37668 in view of Corzani et al, U.S. Patent Application Publication No. 2003/0194566. WO '668 discloses a roofing underlayment comprising a water vapor permeable layer bonded to a fabric layer such as a nonwoven fiber glass. The vapor permeable layer can be more than one layer and therefore meets the limitation of claim 3, in that the structure is unclear other than that a second vapor permeable layer is recited. See page 7 which teaches at least one functional, (breathable), layer and therefore teaches more than one functional layer. The water vapor permeable layer can comprise copolyether ester, polyurethane or copolyether amide. See page 7, fourth full paragraph. The substrate layer can be a fiberglass layer. See page 8, fourth full paragraph. The vapor permeable layer can have a thickness of greater than 2 mils. See page 9, first full paragraph. The combination of the permeable layer and the fibrous substrate layer has a thickness of 0.4 mm which is about 15 mils, and therefore the permeable layer would apparently meet the thickness requirements

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set forth in claims 9 and 12. WO '668 differs from the claimed invention because it does not teach blending an adhesion promoter into the vapor permeable layer and does not teach further adding water repellant, algacide, herbicide antifungal, surface friction agent, flame retardant or coloring dye. Corzani teaches blending an additional component into the breathable layer of a roofing underlayment comprising thermoplastic polymeric layers in order to improve the bonding of the breathable layer to other layers. The additive can include ethylene vinyl acetate grafted with maleic anhydride, (paragraph 0032), or ethylene methyl methacrylate based copolymers. See paragraphs 0032-0034. The composition may further comprise antioxidants, pigments, UV stabilizers, etc. See paragraph 0051. The compositions comprising the blend have better bond strengths. See paragraph 0055. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed the adhesion promoters or improvers taught by Corzani as well as the additives such as pigments, etc., in the breathable layer of WO '668, in order to improve the bonding strength of the composition of WO '668. It is noted that Corzani also teaches film thickness within the claimed ranges. See paragraphs 0068-0069. The composition can be bonded with various fibrous substrates, (paragraph 0079), has a MVTR of at least 100 g per square meter per 24 hours, (paragraph 0084), and is useful in roofing materials, (paragraph 0096).

8. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Topolkaraev U.S. Patent Application Publication 2003/0091677 in view of Krueger, U.S. Patent No. 5,691,034 Topolkaraev discloses a breathable laminate of polyurethane and

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polypropylene. See paragraphs 0043; 0053. Topolkaraev does not teach further blending an adhesion improving additive into the polypropylene. Krueger teaches at col. 6, lines 55-67 that adhesion improving additives can be blended into polypropylene and/or polyurethane layers in order to improve the bonding between the layers.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed an adhesion improving additive as taught by Krueger in the invention of Topolkaraev, in order to improve the adhesion of the layers.

9. Claims 30, 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 96/37668 in view of Corzani et al, U.S. Patent Application Publication No. 2003/0194566 as applied to claims above, and further in view of Krueger et al, U.S. Patent No. 5,691,034. WO '668 and Corzani do not teach the particularly claimed adhesion improving agent. . Krueger teaches at col. 6, lines 55-67 that adhesion improving additives such maleic anhydride modified olefins can be blended into skin and/or core layers of multi layered laminates which comprise polypropylene and/or polyurethane layers in order to improve the bonding between the layers. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed an adhesion improving additive as taught by Krueger in the invention of WO '668, in order to improve the adhesion of the layers.

10. Claims 31 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 96/37668 in view of Corzani et al, U.S. Patent Application Publication No. 2003/0194566 as applied to claims above, and further in view of George et al, U.S. Patent No. 4,282,283. WO '668 and Corzani do not teach the particularly claimed

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adhesion improving agent. George et al teaches in example 1 that titanate coupling agents may be added to compositions in order to facilitate the bonding of a polymeric material and a fiberglass fabric. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added the titanate coupling agents to the breathable layers of WO '668 in order to improve and facilitate bonding.

11. Applicant's arguments have been fully considered but are moot in view of the new grounds of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth M. Cole whose telephone number is (571) 272-1475. The examiner may be reached between 6:30 AM and 6:00 PM Monday through Wednesday, and 6:30 AM and 2 PM on Thursday.

The examiner's supervisor Rena Dye may be reached at (571) 272-3186.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

The fax number for all official faxes is (571) 273-8300.

/Elizabeth M. Cole/
Primary Examiner, Art Unit 1794

e.m.c